

## APPENDIX

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1. (amended) A microporous hollow support fiber membrane comprising solvent-resistant polybenzimidazole having the following characteristics:

- (i) surface pores less than one micron in diameter;
- (ii) nitrogen permeance of at least  $5 \text{ m}^3/\text{m}^2 \cdot \text{hr} \cdot \text{atm}$ ;
- (iii) tensile strength of at least 100 g/fil;
- (iv) elongation at break of at least 10%;
- (v) an inner diameter of from about 200 to about 1000 microns; and
- (vi) a wall thickness of from about 30 to about 200 microns[.]

wherein said hollow support fiber has been rendered solvent-resistant by cross-linking with a multi-functional alkyl halide.

3. (amended) A separation module comprising:

- (a) a chamber having feed and retentate ends and means for removing permeate near the feed end;
- (b) a bundle of thin film composite hollow fiber membranes arranged substantially parallel to each other in said chamber, each of said composite hollow fiber membranes comprising a microporous solvent-resistant hollow support fiber comprising polybenzimidazole having at least one

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permselective coating on the surface of said support fiber, said support fiber having the following characteristics:

- (i) surface pores less than one micron in diameter,
- (ii) nitrogen permeance of at least  $5 \text{ m}^3/\text{m}^2 \cdot \text{hr} \cdot \text{atm}$ ,
- (iii) tensile strength of at least 100 g/fil,
- (iv) elongation at break of at least 10%,
- (v) an inner diameter of from about 200 to about 1000 microns, and
- (vi) a wall thickness of from about 30 to about 200 microns [;and]

wherein said hollow support fiber has been rendered solvent-resistant by cross-linking with a multi-functional alkyl halide; and

- (c) means for securing and sealing said bundle of hollow fiber membranes to said chamber at said feed and retentate ends so as to permit fluid communication with a feed stream.